

**Towards a Process Model of Internetisation:
Becoming an e-Business.**

Gary Buttriss
Associate Lecturer & PhD candidate
School of Marketing
University of New South Wales
Sydney Australia
Phone: +61 2 9385 1284
Email: g.buttriss@unsw.edu.au

Professor Ian F. Wilkinson
Professor of Marketing
School of Marketing
University of New South Wales
Sydney Australia
Phone: +61 2 9385 3289
Email: i.wilkinson@unsw.edu.au

Towards a Process Model of Internetalisation: Becoming an e-Business.

Abstract

This paper suggests a new way of thinking about how an organisation becomes an ebusiness. It suggests that a good metaphor for doing this is to draw on the more familiar concept and much researched issue of firm internationalisation.

Internationalisation refers to the process whereby a firm incrementally increases its commitment to international markets. Here we suggest a new term – internetalisation, to refer to the process of a firm committing resources to Internet commerce and Internet mediated transactions, including communications and coordination of internal and external relations.

Introduction

Uncertainty of appropriate ebusiness models and effective implementation strategies continues to be a concern for organisations seeking to utilize Internet enabled commerce in their operations.

Research to date has concentrated on the adoption of electronic commerce technologies and their diffusion within the organisation. However organisational change is a social as well as technological process and firms may take advantage of Internet technologies on the output side (ecommerce) as well as on the input side (eprocurement) or may implement internal systems of electronic coordination and operation (utilizing Intranets and Extranets).

Here we suggest the more familiar and much researched area of the internationalisation of the firm may act as a good metaphor for thinking about the process of a firm becoming an ebusiness. Internationalisation is the process whereby a firm incrementally increases its commitment to international markets. The process of a firm committing resources to Internet commerce and Internet mediated transactions; including communication and coordination of internal and external relations, we may think of as internetalisation (Wilkinson and Dana 2003). Following the Upsalla model (1975) and Johanson and Vahlne's (1977) original formulation, the core notion is that , as with internationalisation, internetalisation is a learning process. A firm's knowledge of the Internet, including perceptions of opportunities and problems, is acquired to a large extent through the experience of engaging in various forms of Internet enabled commerce. This experience generates business opportunities (and problems), drives the internationalisation process and over time reduces Internet commerce uncertainty. As it gains further experience a firm may be expected to make stronger resource commitments to Internet commerce.

This paper is structured as follows. Firstly a review of the internationalisation literature is presented. This acts as a first step in building a framework for gathering literature on the internetalisation process. A review of this literature follows.

Internationalisation

Internationalisation is seen as a multidimensional process whereby the firm incrementally increases its commitment to international activities (Johanson and Vahlne 1977; Johanson and Wiedersheim-Paul 1975). Commitment has both an attitudinal and behavioural dimension (Stump et al. 1998). The past experience and knowledge of international activities shapes management's perception of the attractiveness of international activities and therefore decisions to make strategic or resources commitments to internationalisation (Wiedersheim-Paul et al. 1978). A firm may be more or less international in terms of the number and nature of foreign markets in which it is involved and may be indicated by the percentage of production or sales derived from foreign markets, or the amount of resources such as labour, capital, technology or knowledge sourced from foreign markets to support the firm in its domestic or other markets. Different functional units within the firm may differ in their degree of involvement in the firm's international activities.

The international process model first proposed by Johanson and Wiedersheim-Paul (1975) suggests that the firm first develops in the domestic market and in striving to maintain its long term growth, while limiting risk, follows a series of incremental decisions of deepening involvement in foreign markets with successively greater psychic distance (Hallén and Wiedersheim-Paul 1979). Other researchers suggest lack of knowledge about foreign markets is the main obstacle to firm internationalisation and that firms will enter countries where they have more knowledge and experience (Fosgren 2000; Hadjikhani 1997; Johanson and Vahlne 1977). Decisions concerning foreign investments are made incrementally due to market uncertainty. The more the firm learns about the market the lower the perceived risk and the higher the subsequent level of investment in the market.

Observation of the gradual commitment of resources and incremental, stepwise involvement in international activities by firms, has led some researchers to classify firms into different stages of internationalisation. In specific markets a firm may follow an 'establishment chain' of increasing commitment resulting from experiential learning in that market which is manifest in the changing operation modes of the firm (Johanson and Wiedersheim-Paul 1975). Others closely follow the ideas of diffusion of innovation put forward by Rogers (1962) with internationalisation proceeding in a stepwise manner of deeper experimental involvement in exporting to gradually more geographically and culturally distant markets.

While the above models suggest that firms become more internationalised gradually over time, some firms may de-internationalise by reducing their level of international involvement in some markets or may reduce operations in some foreign markets in order to re-internationalise in other markets (Benito and Welch 1997). It is also assumed that internationalisation is a gradual process with the firm proceeding through a sequence of pre-determined stages (Barrett and Wilkinson 1986). However an increasing number of firms have been identified that aim at international markets or even global markets from birth and have been termed 'born globals' (Madsen and Servais 1997; McDougall et al. 1994; Oviatt and McDougall 1994; Rasmussen et al. 2001).

The network approach to internationalisation is seen as a process in which relationships are continually established, developed, maintained and dissolved in order to achieve the goals of the firm. Internationalisation strategies available to the firm are dependent on a variety of network relationships, which may drive, facilitate or inhibit a firm's internationalisation. This suggests that internationalisation is inter-organisational as well as intra-organisational (Laine and Kock 2000).

Previous work on internationalisation has identified a number of factors that shape the nature, extent and speed of internationalisation of the firm. Internal factors include management characteristics such as; the personal characteristics of managers, including age, education and amount of time spent traveling or living abroad, their knowledge and experience, and their attitudes and perceptions of international activities (Barrett 1986; Barrett and Wilkinson 1986; Bilkey 1978; Welch and Wiedersheim-Paul 1980). Firm related factors which either support or constrain management decision-making (Cavusgil and Naor 1987) include; firm size, age and experience, resources, technology, organisational structure and the

nature of the products and / or services offered (Barrett and Wilkinson 1986; Cavusgil and Naor 1987; Zou and Stan 1998).

However a firm's ability to internationalise depends not only on its own efforts, skill and resources, but is also dependent on other firms with which it has relationships. A firm's business largely takes place within on-going relationships with suppliers, customers and intermediaries that have been developed over time and in which substantial investment in relationship specific assets has been made (Blankenburg-Holm et al. 1996). Firms build up knowledge about each other and become interdependent over time, developing trust and mutual obligations that facilitate cooperation (Forsgren and Johanson 1992). Relationship partners may provide knowledge about market attractiveness and market intelligence or simply how to do business in foreign markets (Chen and Chen 1998). They may signal opportunities for the firm or potential threats, such as the degree and nature of competition or the establishment of new relationships that may threaten the firm in foreign markets or in the firm's domestic market. Such relationships may be within the domestic market or cross-national boundaries to firms in foreign markets (Martin et al. 1998).

However firms are also enmeshed in broader complex networks of indirect relationships that may facilitate or inhibit internationalisation. Facilitating factors include the size of the domestic market compared to the foreign market, the degree to which other firms within a firm's industry are international, the availability of government support schemes such as facilitating the development of effective relationships, availability of trained and skilled employees and the existence of suitable fast and efficient infrastructure for getting products and services to foreign markets. Inhibitors include the existence of differential trade barriers and the geographic and cultural distance between markets (Johanson and Mattsson 1988; Welch et al. 1997; Wilkinson et al. 2000).

The basic framework is presented below in Figure 1

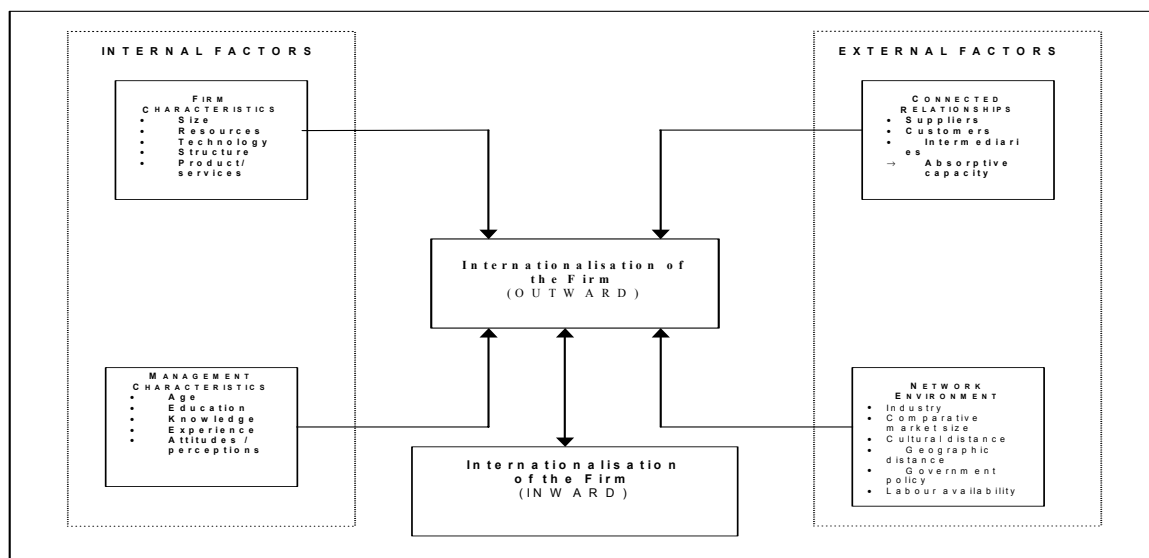


Figure 1 – Internationalisation Framework

Towards an Internetalisation Process Model

Researchers interested in better understanding of effective Internet commerce implementation have seen the process of implementation as similar to other new technologies. They have therefore viewed it as either diffusion of innovation or technology process or as an organisational change process. Studies focusing on diffusion of innovation have been concerned with the implication of adopting specific electronic commerce technologies; principally electronic data interchange (EDI) but more recently Internet commerce technologies and applications (Chan and Swatman 2000; Pfeiffer 1992; Premkumar and Ramamurthy 1995). The emphasis is on the initial adoption and subsequent spreading of the technology to other parts of the organization, including internal diffusion within the organization and externally within its wider user community such as the value chain or industry (Iacovou et al. 1995).

Research drawing on change management theory has instead focused on the implementation process, conceptualizing it as a series of separate stages to better differentiate and describe the process of organisational change. This extends over time, beginning from the decision to introduce the new system and ending when it is incorporated and integrated into the organization and accepted as routine (Cragg 1996; Poon and Swatman 1997). More recently researchers have incorporated organisational learning to account for the learning process that takes place as the organization moves from one project implementation to the next (Chan and Swatman 1999).

In parallel to these studies researchers have investigated factors that influence both the adoption and implementation process. Many have indicated the role the characteristics of the technology play in influencing implementation, such as compatibility, complexity, cost and relative advantage (Pfeiffer 1992; Premkumar and Ramamurthy 1995). In contrast other studies indicate that organisational factors have a greater influence. Factors such as commitment to implementation through management support, user resistance and the level of expertise available are important, along with firm specific factors such as firm size and resource availability (Chan and Swatman 1998; Cragg 1996; Iacovou et al. 1995), organization structure and the existence of legacy systems and ability to integrate systems (Wortmann and Szirbik 2001).

The business functions supported by electronic commerce are varied and include manufacturing and production; sales and marketing; finance and accounting. Electronic commerce systems have been largely used to automate business transactions to provide cost savings, through streamlining processes and operations, integrating billing and payment systems in the supply chain management and improving customer service. However while electronic commerce has technical components similar to other technologies, it also has inter-organisational elements, which distinguish it from other innovations (Grewal et al. 2001; Mehrtens et al. 2001).

This suggests that implementation takes place within inter-organisational context. Studies have shown that relationships between established trading partners

influence adoption and implementation (Dos Santos and Peffers 1998), with electronic commerce solutions often imposed on smaller firms by larger more powerful customers or suppliers (Benbasat et al. 1993). Still other studies show that good relationship and trust between trading partners are important to successful implementation (Chan and Swatman 2000).

Other factors external to the firm have also been identified. These may be classified as environmental factors and include the market structure and degree of concentration and nature of Internet commerce technologies adopted by industry partners (Dos Santos and Peffers 1998; Kern and Willcocks 2002), and competitors (Benbasat et al. 1993; Ling 2000; Premkumar and Ramamurthy 1995). Critical mass or externalities are also important, without wide acceptance of technologies or applications firms may be reluctant to adopt Internet commerce because of lack of infrastructure (Kern and Willcocks 2002), suitable platform or compatible technology standards (Ling 2000). In addition national infrastructure issues such as the technical capability, capacity and reach of the communications network along with the level of government support and involvement in terms of government policies and initiatives (Timmers 2000). Concerns of privacy, security and data integrity (Reagle 1997) have also been shown to influence the uptake and rate of diffusion of Internet commerce systems.

The internetalisation framework is presented below in Figure 2

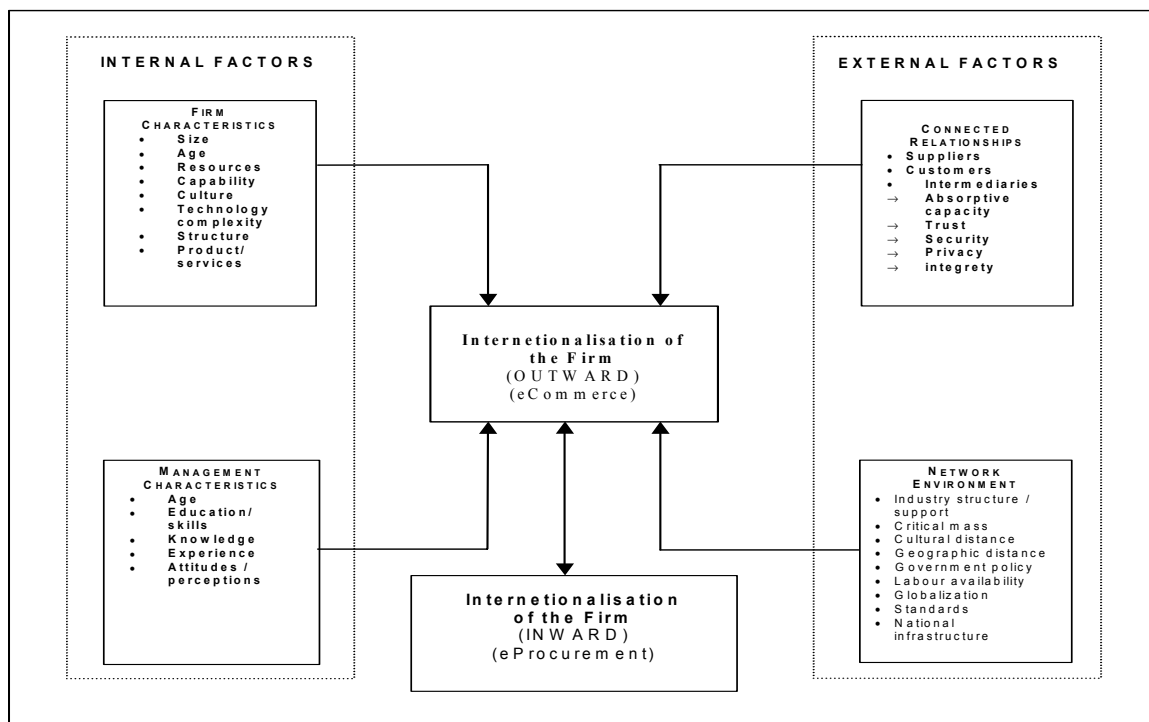


Figure 2 – Internetalisation Framework

Conclusion

This paper presented a new way of thinking about the various factors that influence take up of Internet technologies and shape the behaviour and performance of organisations. In doing so it conceptualizes some of the challenges facing firms and researchers in this area.

Continued convergence of computing and communications technologies has led to successive waves of technological development and application to business processes. These have been accompanied by much hype as to the potential impact of Internet enabling technologies. Some 'brick and mortar' firms have implemented and adapted the new technologies and new 'dot com' organisations have been born. Some have tried to replicate their physical 'brick and mortar' cousins, while others represent completely new species of virtual, 'click' organisation operating exclusively in the electronic world.

Some of the promises of Internet technologies have been elusive and the 'dot com' crash of 2000 has seen a sorting out process with many 'dot coms' now 'dot gones'. While some virtual 'dot coms' have survived the crash and even evolved and grown to now have a physical presence, many have died or atrophied to be only a shadow of their former selves. Others have been grafted on to incumbent 'brick and mortar' firms to produce hybrid 'bricks and clicks' organisation.

Seeking to develop a process model seems timely. Reports of dot com firms rising 'phoenix like' from the tech wreck of 2000 appear from time to time, the NASDAQ rallies only to quickly fall back on news of further failures of electronic business models. It is reminiscent of the period of natural history after the death of the dinosaurs. Depending on your view - whether an empty barrel Darwinist like Stephen J. Gould (1989) or a mutationist like Stuart Kauffman (1995) – the punctuated evolution resulting, means that in a short space of time a host of new species were 'invented' and co-produced a new ecological system which eventually chose the winners and losers. It is exciting to wonder where the new Microsofts or Amazon's will come from: are they born yet or are they a mutation to come! '

References

Barrett, Nigel J. (1986), "A Study of the Internationalisation of Australian Firms," Unpublished PhD, University of New South Wales.

Barrett, Nigel J. and Ian F. Wilkinson (1986), "Internationalisation Behaviour : Management Characteristics of Australian Manufacturing Firms by Level of International Development," in Research in International Marketing, P.W. Turnbull and S.J Paliwodi, Eds. Beckenham, Kent: Croom Helm.

Benbasat, I., M. Bergeron, and A.S Dexter (1993), "Development and Adoption of Electronic Data Interchange Systems; A Case Study of the Liquor Distribution Branch of British Columbia," ASAC, 153-63.

Benito, Gabriel R.G and Lawrence S. Welch (1997), "De-internationalization," Management International Review, 37 (2), 7-25.

Bilkey, Warren J. (1978), "An Attempted Integration of the Literature on the Export Behaviour of Firms," *Journal of International Business Studies*, 9 (1), 33-46.

Blankenburg-Holm, Desiree, Kent Eriksson, and Jan Johanson (1996), "Business Networks and Cooperation in International Business Relationships," *Journal of International Business Studies*, Special Issue, 1033-53.

Cavusgil, S. Tamer and Jacob Naor (1987), "Firm and Management Characteristics as Discriminators of Export Marketing Activity," *Journal of Business Research*, 15, 221-35.

Chan, C and P.M.C. Swatman (1998), "EDI implementation: A broader perspective," in Eleventh International Bled Electronic Commerce Conference, Doukidis et al (Ed.). Bled, Slovenia.

Chan, Caroline and Paula M.C. Swatman (1999), "E-Commerce Implementation in Australia: A Case Study Approach."

---- (2000), "From EDI to Internet Commerce; the BHP Steel Experience," *Internet Research: Electronic Networking Applications and policy*, 10 (1), 72-82.

Chen, Homin and Tain-Jy Chen (1998), "Network Linkages and Location Choice in Foreign Direct Investment," *Journal of International Business Studies*, 29 (3), 445-68.

Cragg, Paul (1996), "Adoption of the Internet by Small Firms," Vol. 2002: Southern Cross University.

Dos Santos, Brian L. and Ken Peppers (1998), "Competitor and vendor influence on the adoption of innovative applications in electronic commerce," *Information & Management*, 34, 175-84.

Forsgren, Mats and Jan Johanson (1992), "Managing Internationalization in Business Networks," in *Managing Networks in International Business*, Mats Forsgren and Jan Johanson, Eds.: Gordon & Breach Science.

Fosgren, Mats (2000), "Some Critical Notes on Learning in the Uppsala Internationalization Process Model," Working Paper 2000/2, Uppsala University.

Gould, Stephen J. (1989), *Wonderful Life*. London: Penguin Books.

Grewal, Rajdeep, James M. Comer, and Raj Mehta (2001), "An Investigation into the Antecedents of Organizational Participation in Business-to-Business Electronic Markets," *Journal of Marketing*, 65 (July), 17-33.

Hadjikhani, Amjad (1997), "A note on the criticisms against the internationalization process model," Working Paper, Uppsala University.

Iacovou, Charalambos L., Izak Benbasat, and Albert S. Dexter (1995), "Electronic Data Interchange and Small Organisation Adoption and Impact of Technology," *MIS Quarterly*, December, 465-85.

Johanson, Jan and Finn Wiedersheim-Paul (1975), "The Internationalization of the Firm: Four Swedish Case Studies," *Journal of Management Studies*, October, 305-22.

Johanson, Jan. and Jan-Erik Vahlne (1977), "The Internationalization Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitments," *Journal of International Business Studies*, Spring/Summer, 23-32.

Johanson, Jon and Lars-Gunnar Mattsson (1988), "Internationalisation in Industrial Systems - A Network Approach," in *Strategies in Global Competition*, Niel Hood and Jan-Erick Vahlne, Eds. New York: Croom Helm.

Kauffman, Stuart (1995), *At Home in the Universe*. Oxford: Oxford University press.

Kern, T and L Willcocks (2002), "Exploring relationships in information technology outsourcing: the interactive approach," *European Journal of Information Systems*, 11, 3-19.

Laine, Annika and Sören Kock (2000), "A Process Model of Internationalization- New Times Demands New Patterns," in *IMP 2000 Conference*. Bath, UK.

Ling, Chong Yee (2000), "Model of Factors Influences on Electronic Commerce Adoption and Diffusion in Small and Medium-sized Enterprises." Geelong: Curtin University of Technology, Australia.

Madsen, Tage Koed and Per Servais (1997), "The Internationalization of Born Globals: an Evolutionary Process?," *International Business Review*, 6 (6), 561-83.

Martin, Xavier, Anand Swaminathan, and Will Mitchell (1998), "Organizational Evolution in the Interorganizational Environment: Incentives and Constraints on International Expansion Strategy," *Administrative Science Quarterly*, 43, 566-601.

McDougall, Patricia Phillips, Scott Shane, and Benjamin M. Oviatt (1994), "Explaining the Information of International New Ventures: the limits of theories from international business research," *Journal of Business Venturing*, 9, 469-87.

Mehrtens, Jenni, Paul B. Cragg, and Annette M. Mills (2001), "A model of Internet adoption by SME's," *Information & Management*, 39, 165-76.

Oviatt, Benjamin M. and Patricia Phillips McDougall (1994), "Towards a Theory of International New Ventures," *Journal of International Business Studies*, First Quarter, 45-64.

Pfeiffer, H.C.K. (1992), *The Diffusion of Electronic Data Interchange*. New York: New York: Springer-Verlag.

Poon, Simpson and Paula M.C. Swatman (1997), "Small Business use of the Internet: Findings from Australian case studies," *International Marketing Review*, 14 (5), 385-402.

Premkumar, G. and K. Ramamurthy (1995), "The Role of Interorganizational and Organizational Factors on Decision Mode for Adoption of Interorganizational Systems," *Decision Sciences*, 26 (3), 303-36.

Rasmussen, Erik S., Tage Koed Madsen, and Felicitas Evangelista (2001), "The Founding of the Born Global Company in Denmark and Australia: Sensemaking and Networking," *Asia Pacific Journal of Marketing and Logistics*, 13 (3).

Reagle, Joseph (1997), "Summary and Analysis: Framework for Global Electronic Commerce." 970706 ed. Vol. 2002: W3C.

Rogers, Everett M. (1962), *Diffusion of innovations*. New York: The Free Press.

Seely Brown, John and Paul Duguid (2000), *The Social Life of Information* (2002 ed.). Boston, MA: Harvard Business School Press.

Stump, Rodney L., Gerard A. Athaide, and Catherine N. Axinn (1998), "The Contingent Effect of the Dimensions of Export Commitment on Exporting Financial Performance: An Empirical Examination," *Journal of Global Marketing*, 12 (1), 7 - 24.

Timmers, Paul (2000), *Electronic Commerce: Strategies and Models for Business-to-Business Trading*. Chichester: John Wiley & Sons Ltd.

Welch, Denice E., Lawrence S. Welch, Loise C. Young, and Ian F. Wilkinson (1997), "The Importance of Networks in Export Promotion: Policy Issues," *Journal of International Marketing*, 6 (4), 66-82.

Welch, Lawrence S. and Finn Wiedersheim-Paul (1980), "Initial Exports - A Marketing Failure," *Journal of Management Studies*, 17 (October).

Wiedersheim-Paul, Finn, Hans C. Olson, and Lawrence S. Welch (1978), "Pre-Export Activity: The First Step in Internationalization," *Journal of International Business Studies*, 9 (Spring/Summer), 47-58.

Wilkinson, I. F. and L.P. Dana (2003), "Internetalisation: a new concept for the new economy," *International Journal of Entrepreneurship*, forthcoming.

Wilkinson, Ian F., Lars-Gunnar Mattsson, and Geoff Easton (2000), "International Competitiveness and Trade Promotion Policy from a Network Perspective," *Journal of World Business*, 35 (3), 275-99.

Wortmann, Hans and Nick Szirbik (2001), "ICT issues among collaborative enterprises: from rigid to adaptive agent-based technologies," *Production Planning & Control*, 12 (5), 452-65.

Zou, Shaoming and Simona Stan (1998), "The determinants of export performance: a review of the empirical literature between 1987 and 1997," *International Marketing Review*, 15 (5), 333-56.